In the Claims

1. (Currently Amended) An apparatus comprising:

a preemption manager having as an input, a Quality of Service (QoS) and channel conditions and outputting preemption values; and

a bandwidth allocation adaptor ~~having as an input a first set of~~ receiving queue weights, channel quality information, and the preemption values, and outputting modified queue weights based on the ~~first set of~~ queue weights, the channel quality information, and the preemption values;

wherein the channel quality information comprises a plurality of effective link rates, each link rate associated with a shared channel from a source station to one of a plurality of destination stations in a shared medium network and determined by accounting for loss in throughput due to error losses in the shared channel.

2. (Original) The apparatus of claim 1 further comprising a packet scheduler having the modified queue weights as an input, and scheduling packets based on the modified queue weights.

3. (Original) The apparatus of claim 2 further comprising:

a plurality of data queues coupled to the packet scheduler, wherein each data queue within the plurality of data queues has an associated service-level agreement.

4. (Currently Amended) An apparatus comprising:

a bandwidth allocation adaptor having a channel quality vector (σ) as an input and outputting a set of queue weights (**B'**) based on the channel quality ~~information~~ vector, wherein the channel quality vector comprises a plurality of effective link rates, each link rate associated with a shared channel from a source station to one of a plurality of destination stations in a shared medium network and determined by accounting for loss in throughput due to error losses in the shared channel.

5. (Original) The apparatus of claim 4 wherein the bandwidth allocation adaptor additionally has a set of preemption values (**P**) as an input, wherein the queue weights are additionally based on the set of preemption values.

6. (Original) The apparatus of claim 4 wherein the bandwidth allocation adaptor additionally has a set of original queue weights (**B**) as an input, wherein the queue weights are additionally based on the set of original queue weights.

7. (Original) The apparatus of claim 4 further comprising:

a packet scheduler having **B**' as an input, and scheduling packets based on **B**'.

8. (Original) The apparatus of claim 7 further comprising:

a plurality of data queues coupled to the packet scheduler, wherein each data queue within the plurality of data queues has an associated service-level.

9. (Currently Amended) A method comprising the steps of:

receiving ~~channel conditions~~ a channel quality vector (σ) wherein the channel quality vector comprises a plurality of effective link rates, each link rate associated with a shared channel from a source station to one of a plurality of destination stations in a shared medium network and determined by accounting for loss in throughput due to error losses in the shared channel; and

calculating queue weights (**B**') based on the channel quality vector ~~conditions~~.

10. (Original) The method of claim 9 further comprising the step of:

outputting the queue weights to a packet scheduler, wherein the packet scheduler utilizes the queue weights for scheduling packets.

11. (Original) The method of claim 9 further comprising the step of:

receiving preemption values (**P**); and

wherein the step of calculating the queue weights (**B**') comprises the step of additionally basing the calculation of the queue weights on the preemption values.

12. (Original) The method of claim 11 further comprising the step of:

receiving original queue weights (**B**); and

wherein the step of calculating the queue weights (**B**') comprises the step of additionally basing the calculation of the queue weights on the original queue weights.

13. (Currently Amended) A method comprising the steps of:

receiving ~~channel conditions~~ a channel quality vector (σ)wherein the channel quality vector comprises a plurality of effective link rates, each link rate associated with a

shared channel from a source station to one of a plurality of destination stations in a shared medium network and determined by accounting for loss in throughput due to error losses in the shared channel;

receiving preemption values (**P**);

receiving original queue weights (**B**); and

calculating modified queue weights (**B**') based on σ, **P**, and **B**.

14. (Original) The method of claim 13 further comprising the step of:

outputting **B**' to a packet scheduler, wherein the packet scheduler utilizes **B**' for scheduling packets.